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DATE ~~R~~ Aug.20/02**V2500-A5/D5 PROPULSION SYSTEMS SERVICE BULLETIN**

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This document transmits Revision 1 to Service Bulletin EV2500-72-0405 and  
 Revision 1 to the Supplement

Document History

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Bulletin Revision 1

Remove  
 All pages of the  
 Service Bulletin

Incorporate  
 Pages 1 to 8 of the  
 Service Bulletin

Reason for change  
 To update Effectivity and  
 update Supplemental  
 Information.

Supplement Revision 1

Remove  
 All pages

Incorporate  
 Pages 1 to 3

Reason for change  
 To update Effectivity and  
 update Supplemental  
 Information.

**V2500-ENG-72-0405**  
 Transmittal - Page 1 of 2

CHECK THAT ALL PREVIOUS TRANSMITTALS HAVE BEEN INCORPORATED

If any have not been received please advise Publication Services, Rolls-Royce plc, Derby, England

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# LIST OF EFFECTIVE PAGES

The effective pages to this Service Bulletin following incorporation of Revision 1 to the Bulletin and Revision 1 to the Supplement are as follows:

<u>Page</u>	<u>Revision Number</u>	<u>Revision Date</u>
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## Bulletin

R	1	1	Aug.20/02
R	2	1	Aug.20/02
R	3	1	Aug.20/02
R	4	1	Aug.20/02
R	5	1	Aug.20/02
R	6	1	Aug.20/02
R	7	1	Aug.20/02
R	8	1	Aug.20/02

## Supplement

R	1	1	Aug.20/02
R	2	1	Aug.20/02
R	3	1	Aug.20/02

Printed in Great Britain

V2500-ENG-72-0405  
Transmittal - Page 2



ENGINE – PROVIDE NEW NUMBER FOUR BEARING FRONT AND REAR SEALS

1. Planning Information

A. Effectivity

(1) Airbus A319

V2522-A5, V2524-A5, V2527M-A5 Engine Serial No. V10001 thru V11190,  
V11192, V11194, V11196, V11198, V11200, V11202, V11204, V11206, V11208,  
V11210, V11212, V11214, V11216, V11218, V11220 and V11222

(2) Airbus A320

(a) V2500-A1 Engine Serial No. V0001 thru V0361

(b) V2527-A5, V2527E-A5 Engine Serial No. V10001 thru V11190, V11192,  
V11194, V11196, V11198, V11200, V11202, V11204, V11206, V11208,  
V11210, V11212, V11214, V11216, V11218, V11220 and V11222

(3) Airbus A321

V2530-A5, V2533-A5 Engine Serial No. V10001 thru V11190, V11192, V11194,  
V11196, V11198, V11200, V11202, V11204, V11206, V11208, V11210, V11212,  
V11214, V11216, V11218, V11220 and V11222

(4) Boeing – Longbeach Division MD-90

V2525-D5, V2528-D5 Engine Serial No. V20001 thru V20285

(5) ATA Locator 72-43-00

B. Concurrent Requirements

There are no concurrent requirements.

C. Reason

(1) Problem:

Black oil is being experienced on the V2500.

(2) Background:

Changes must be made to the V2500 No. 4 Bearing Compartment to improve customer satisfaction.

(a) Engines that operate in hot environments have been found to generate black oil.



(b) Customers and overhaul shops have noticed that the bearing compartment part number cannot be read at overhaul.

(3) Objective:

Improve configuration to improve customer satisfaction.

(a) Redesign seal plates by relocating the oil pool drain exit hole orientation from axial to radial. This will improve cooling effectiveness and minimize generation of black oil.

(b) Improve visibility of part marking by changing the location and increasing the minimum depth of the marking. Also provide serial number requirement to improve tracking of seal plates.

(4) Substantiation:

Design change was substantiated through an engine endurance test run of 150 hours. Teardown inspection revealed there was no distress of the seal plate and there was no evidence of black oil. The new configuration is also similar to other Pratt Whitney engines.

(5) Effects of Bulletin on:

Operation:

None

Maintenance:

None

Overhaul:

None

Repair Schemes:

None

Interchangeability:

None

Fits and Clearances:

None



## (6) Supplemental Information

R It is permissible to waive the serialization requirements for the new  
R front and rear seat seals until engine V11300.

D. Description

Replace the Front and Rear Number Four Bearing Seals.

E. Compliance

Category 6

Accomplish when the subassembly (i.e. modules, accessories, components, build groups) is disassembled sufficiently to afford access to the affected part and to all affected spare parts.

F. Approval Data

The part number changes and/or part modifications specified in the Accomplishment Instructions and Material Information sections of this Service Bulletin have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved for the engine model(s) given.

G. Manpower

Estimated man-hours to incorporate the full intent of this Bulletin:

Venue	Estimated Manhours
In Service	Not Applicable
At Overhaul	Not Applicable

H. Weight and Balance

Weight Change	None
Moment	No Effect
Datum	Engine Front Mount Centerline (Power Plant Station (PPS) 100)

I. Electrical Load Data

This Service Bulletin has no effect on the aircraft electrical load.

J. Software Accomplishment Summary

Not Applicable.



K. References

1. IAE V2500 Service Bulletin V2500-ENG-72-0036 Engine - No. 4 Bearing Compartment - Rework No. 4 Bearing Front And Rear Seal Seats To Incorporate Revised Surface Finish And Hardface Thickness.
2. V2500 Standard Practices/Processes Manual 70-09-00 Marking of Parts.
3. V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section 72-43-11 and 72-43-14.
4. V2500 Engine Manual (E-V2500-1IA), Chapter/Section 72-43-11 and 72-43-14.
5. V2500 Engine Manual (E-V2500-3IA), Chapter/Section 72-43-11 and 72-43-14.
- R 6. Internal reference 98VA011, 98VA011-01, 98VA011-04.

L. Other Publications Affected

1. V2500 Engine Illustrated Parts Catalogs (S-V2500-1IA, S-V2500-2IA, S-V2500-2IB, S-V2500-3IA, S-V2500-3IB, S-V2500-5IA, S-V2500-5IB, S-V2500-6IA, S-V2500-6IB, S-V2500-7IA, and S-V2500-7IB), Chapter/Section 72-43-11 and 72-43-14.
2. V2500 Engine Manuals (E-V2500-1IA and E-V2500-3IA), Chapter/Section 72-43-11 and 72-43-14 Cleaning, Inspection and Repair, to add the new part.

M. Interchangeability of Parts

Old and new parts are directly interchangeable.

N. Information in the Appendix

Alternate Accomplishment Instructions (No)

Progression Charts (Yes)

Added Data (Yes)

Revision to Table of Limits (No)

Inspection Procedures (No)

**2. Material Information****A. Material – Price and Availability**

1. Part prices were not available at the time of Service Bulletin publication. Contact IAE's Spare Parts Sales Department for firm quotations.
2. There is no kit provided to do this Service Bulletin.
3. Part availability information is provided in material data Instructions-Disposition.

**B. Industry Support Program**

Not Applicable.

**C. The material data that follows is for each engine.**

**NOTE:** The prices shown are for estimating purposes only and as such are given in good faith without commercial liability for advanced planning purposes only. Refer to IAE Spares and/or current Price Catalog for current prices.

For V2500-A1 Engines Not Incorporating Service Bulletin V2500-ENG 72-0036:

New PN	Qty	Estimate of Unit Price (\$)	Keyword	Old PN	Instructions-Disposition
2A3432	1	*	.Seat, No.4 Brg Seal Front	2A0066 (72-43-11-01-010)	(2)(A)(N)
2A3433	1	*	.Seat, No.4 Brg Seal Rear	2A0067 (72-43-14-01-020)	(2)(A)(N)

For V2500-A1 Engines Incorporating Service Bulletin V2500-ENG 72-0036:

New PN	Qty	Estimate of Unit Price (\$)	Keyword	Old PN	Instructions-Disposition
2A3432	1	*	.Seat, No.4 Brg Seal Front	2A1998 (72-43-11-01-010)	(2)(A)(N)
2A3433	1	*	.Seat, No.4 Brg Seal Rear	2A1999 (72-43-14-01-020)	(2)(A)(N)

For V2522-A5, V2524-A5, V2527-A5, V2527E-A5, V2527M-A5, V2530-A5, V2533-A5,

**V2525-D5, V2528-D5 Engines:**

New PN	Qty	Estimate of Unit Price (\$)	Keyword	Old PN	Instructions- Disposition
2A3432	1	*	.Seat, No.4 Brg Seal Front	2A1998 (72-43-11-01-010)	(2)(A)(N)
2A3433	1	*	.Seat, No.4 Brg Seal Rear	2A1999 (72-43-14-01-020)	(2)(A)(N)

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**D. Instructions/Disposition Code Statements:**

(2) The new part is a replacement part only, and cannot be obtained by modification of the old part.

(A) The new part is available.

(N) The old part is not available.

**E. Tooling – Price and Availability**

Special tools are not required to accomplish this Service Bulletin.

**F. Other Material Information Data**

Not Applicable.





### 3. Accomplishment Instructions

(1) For V2500-A1/A5 Engines

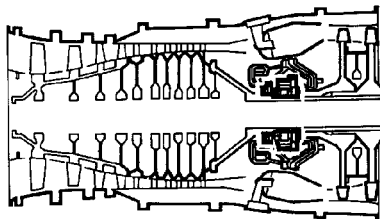
- (a) Replace the Seat, No. 4 Bearing Seal Front, PN 2A0066 or 2A1998 with 2A3432.
- (b) Replace the Seat, No. 4 Bearing Seal Rear, PN 2A0067 or 2A1999 with 2A3433.

(2) For V2500-D5 Engines.

- (a) Replace the Seat, No. 4 Bearing Seal Front, PN 2A1998 with 2A3432.
- (b) Replace the Seat, No. 4 Bearing Seal Rear, PN 2A1999 with 2A3433.

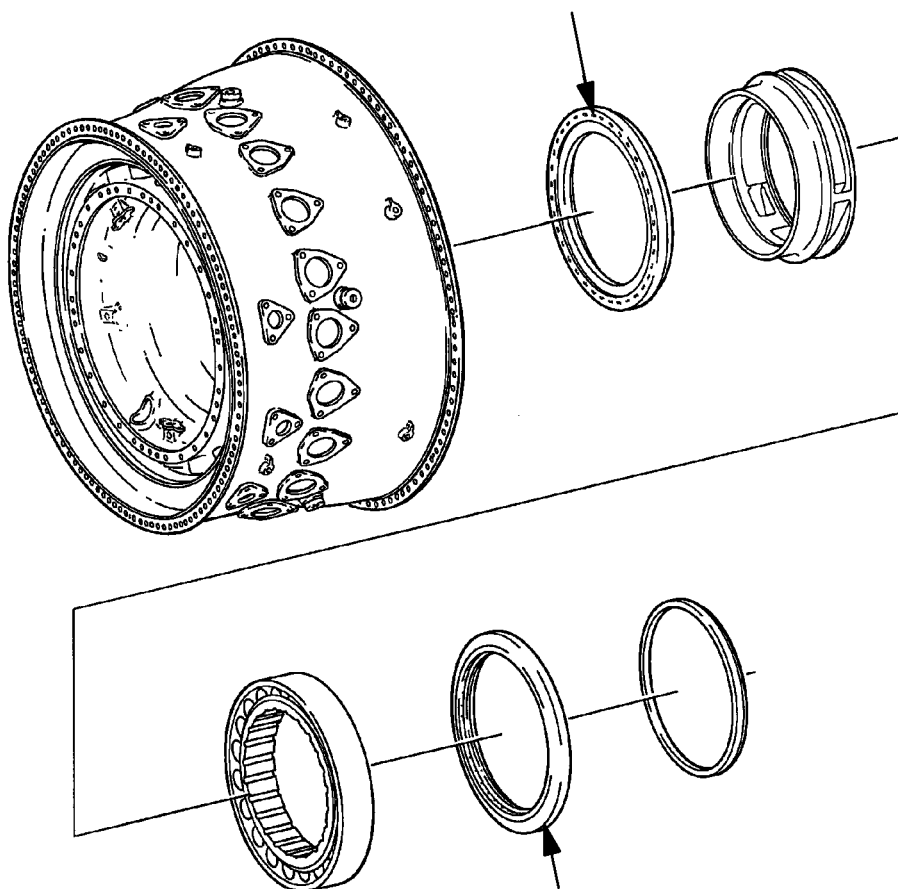
(3) Recording Instructions

- (a) A record of accomplishment is required.



MODULE 40

REPLACE SEAT NO. 4 BEARING  
SEAL FRONT PN 2A0066 OR  
2A1998 WITH 2A3432



REPLACE SEAT NO. 4 BEARING  
SEAL REAR PN 2A0067 OR  
2A1999 WITH 2A3433

E8413

Front and rear seat No.4 bearing seal  
Fig 1

V2500-ENG-72-0405

Page 8



International Aero Engines

SERVICE BULLETIN

ENGINE – PROVIDE NEW NUMBER FOUR BEARING FRONT AND REAR SEALS

Figs 2 and 3 Parts Progression To Show the Changed Part in Relation to Other Parts

Added data

Number values shown in parenthesis adjacent to U.S. values are Systeme  
Internationale equivalents.

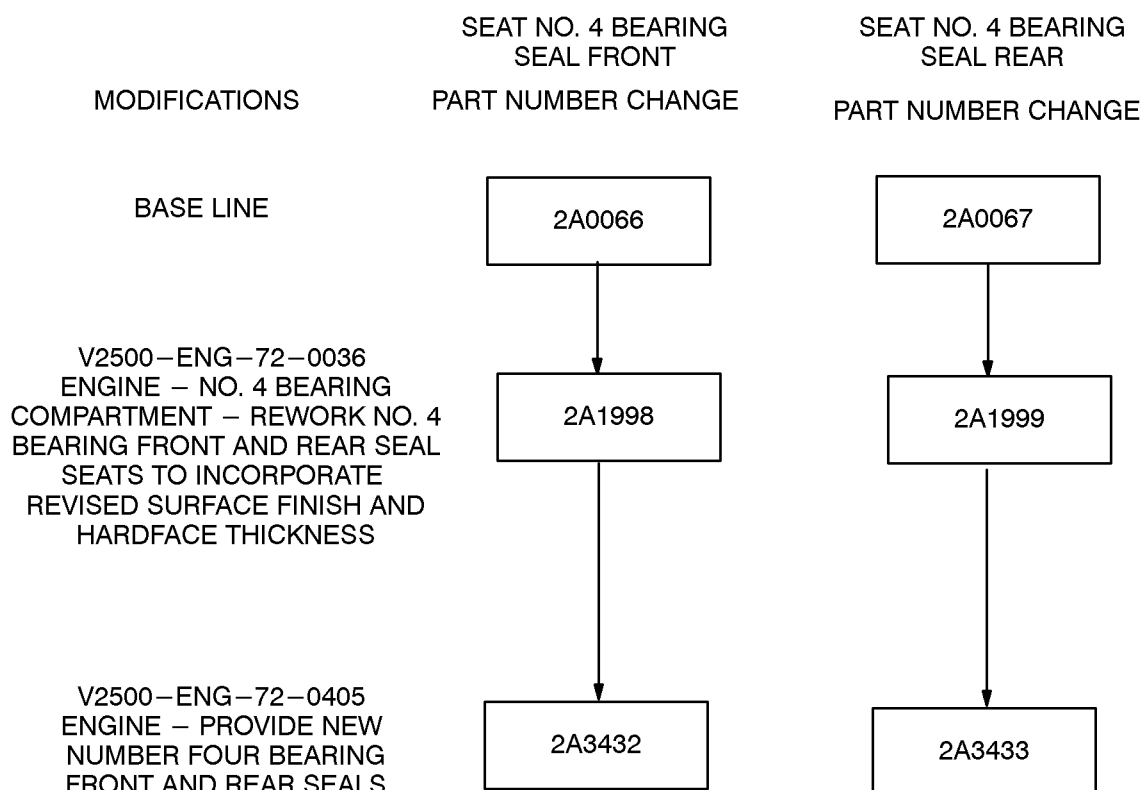
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V2500–ENG–72–0405  
Supplement Page 1 of 3

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E8414

PWH

Family tree – Front and rear seat No.4 bearing seal (V2500-A1) Ref catalog sequence  
No. 72-43-11 Fig 01 item 010 and 72-43-14 Fig 01 item 020  
Fig 2

**V2500-ENG-72-0405**  
Supplement Page 2

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Sep 20/01  
R Aug.20/02

